

Claims

1. A carrier for holding an electric component having a one or more electrical connection pins, comprising a frame for holding the component, a pin guide, and a flexible portion connecting the pin guide to the frame, wherein:

a) the pin guide has one or more channels therethrough for receiving said electrical connection pins, the or each channel extending along a connection axis;

b) the frame has a base for mounting the carrier to a surface that extends transverse to the connection axis; and

c) the flexible portion is adapted to flex to allow the pin guide to move parallel to the connection axis when the pin guide is pressed in a direction along the connection axis.

2. An electronic assembly, comprising a carrier and an electronic component having one or more connection pins, the electronic component being assembled to the carrier and the carrier comprising a frame for holding the component, a pin guide, and a flexible portion connecting the pin guide to the frame, wherein:

a) the pin guide has one or more channels therethrough that receive said electrical connection pins, the or each channel extending along a connection axis;

b) the frame has a base for mounting the carrier to a surface that extends transverse to the connection axis; and

c) the flexible portion is adapted to flex to allow the pin guide to move parallel to the connection axis when the pin guide is pressed in a direction along the connection axis.

3. An electronic assembly as claimed in Claim 2, in which: the or each channel has an entrance into which an end of the corresponding pin is inserted when the electronic component is assembled to the carrier, and an exit from which the pin protrudes when the pin guide is moves along the connection axis; and the end of the pin is protected within the channel when the electronic component is initially assembled to the carrier, and protrudes from the channel when the pin guide is moved along the connection axis.

4. An electronic assembly as claimed in Claim 3, in which the pin guide has one or more protrusions that extend beyond the channel exit(s) in the direction of the connection axis.

5. An electronic assembly as claimed in Claim 3, in which the entrance to the channel is funnel-shaped to aid insertion of the corresponding pin.

6. An electronic assembly as claimed in Claim 2, in which the or each channel exit has a clearance fit with the corresponding pin to align the pin in orthogonal transverse directions to the connection axis when said pin protrudes from the exit.

7. An electronic assembly as claimed in Claims 2, in which the flexible portion is resiliently biased to a neutral position, and the end of the pin is fully retained in the channel when the flexible portion is in the neutral position.

8. An electronic assembly as claimed in Claim 2, in which the flexible portion of the carrier comprises a pair of arms that extend generally transverse to the connection axis in opposite directions from the frame towards the pin guide.

9. An electronic assembly as claimed in Claim 2, in which the electronic component is a planar display element with one or more connection pins extending from the element in a direction transverse to the plane of the element.

10. A circuit board assembly, comprising an electronic assembly and a circuit board, the electronic assembly being mounted to the circuit board, and the electronic assembly comprising a carrier and an electronic component having one or more connection pins, the electronic component being assembled to the carrier and the carrier comprising a frame for holding the component, a pin guide, and a flexible portion connecting the pin guide to the frame, wherein:

a) the pin guide has one or more channels therethrough that receive said electrical connection pins, the or each channel extending along a connection axis;

b) the frame has a base for mounting the carrier to a surface that extends transverse to the connection axis;

c) the flexible portion is adapted to flex to allow the pin guide to move parallel to the connection axis when the pin guide is pressed in a direction along the connection axis; and

d) the or each connection pin is electronically connected to a matching connection on the circuit board.

11. A circuit board assembly as claimed in Claim 10, including a socket, the socket being mounted on the circuit board and having one or more pin receptacles, in which the shape of the pin guide matches the shape of the socket so that the or each pin is automatically aligned with a corresponding pin receptacle as the electronic assembly is mounted to the circuit board.

12. A circuit board assembly as claimed in Claim 10, in which the socket protrudes from the circuit board, and the pin guide has a recess that matches the protrusion of the socket.

13. A circuit board assembly as claimed in Claim 11, in which the carrier and circuit board have an alignment means by which the carrier is brought into approximate alignment with the circuit board as the electronic assembly is mounted to the circuit board.

14. A circuit board as claimed in Claim 13, in which during mounting of the electronic assembly to the circuit board, the approximate alignment is made before the pin guide comes into contact with the socket.